

# Bilan des acquis et des cours suivis

## 1 Zhe

1. Calculation of led emission intensity and illuminance on target surface. According to the course of radiology of IOGS
2. Control the luminous intensity of LED <http://lense.institutoptique.fr/nucleo-regler-lintensite-lumineuse-dune-led-2/>
3. Control mpu9250 to automatically measure angle <https://os.mbed.com/components/MPU-9250/>
4. Write code to achieve port data reception by MATLAB <https://blog.csdn.net/cycy/article/details/53883793>
5. MATLAB code writing, such as polynomial fitting <https://www.mathworks.com/>
6. Write code to control the nucleo by MBED According to the course of Electronic experiment of IOGS <http://lense.institutoptique.fr/prototyper-avec-nucleo-et-mbed-tutoriels-a-la-carte/>

## 2 Puyuan

1. Based on the relevant knowledge of the "Automatique" course, we have constructed a closed-loop system, which includes the Measurement part and Feedback Correction.
2. Regarding the calculation of Lumniance, Flux, Intensity and other physical quantities, we used the knowledge learned in the Radiometry course.
3. When researching Photodiode detecting Flux in the target area, after the teacher reminded us, we used the model of "Flux collect system" learned in the course.
4. Throughout the experiment, we used matlab for programming. For data processing, we use fast Fourier transform FFT, and low-pass filtering and other related laborious methods. This knowledge comes from "Scientific calculation". It is worth mentioning that the relevant knowledge in the "taitement d'image" course also gave us some inspiration.
5. During the experiment, we regard multiple light sources as Lambertian bodies. And when dealing with diffuse reflection problems, we borrowed the Lambert model [https://en.wikipedia.org/wiki/Lambertian\\_reflectance](https://en.wikipedia.org/wiki/Lambertian_reflectance)

## 3 Nicolas

1. Création d'Interface graphique GUIDE [https://fr.mathworks.com/help/matlab/creating\\_guis/about-the-simple-guide-gui-example.html](https://fr.mathworks.com/help/matlab/creating_guis/about-the-simple-guide-gui-example.html)
2. APP Inventor et bleutooth <https://www.youtube.com/watch?v=fr0yT7Ad1AE>
3. Use Fritzin and simulate on this système

- https://fritzing.org/learning/* 4. Étude de problématiques et création d'un planning avec répartition des tâches
5. Utilisation d'une plate-forme de partage de projet type Basecamp
  7. Travailler sur un projet à distance